

Miss Bullingson

1/8-Scale RTR Nitro Unlimited Hydroplane



Specifications

Overall Length	
Beam	
Engine	Zenoah® G23 Marine
Radio System	JR XR3i FM radio



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Introduction

Thank you for purchasing the Pro Boat™ Miss Budweiser 1/8-Scale RTR Unlimited Hydroplane. This is a 1/8-scale replica of the world famous full-scale hydro that is piloted by champion driver and team manager, Dave Villwock. Owner Bernie Little's Miss Budweiser has tallied over 130 victories and 21 championships! The scale features and speeds of this high-performance RC model can have you feeling like Dave Villwock, looking to leave everyone in your wake!

Because the Miss Bud is a high-performance hydro boat, the warranty is limited. Please note that once gasoline has been run through the engine, you must contact Horizon Hobby, Inc. directly regarding any warranty questions that you may have. Please do not contact your local hobby shop regarding warranty issues, even if that is where you purchased it. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance.

Horizon Service Center: 1-877-504-0233

WARNING

This boat is not a toy! It is a high-performance RC model boat. Do not take risks that could endanger you or others.

It is important that you read and follow this instruction manual, along with the JR XR3i radio system manual and the Zenoah® G23 engine manual, before you run this exciting boat. Failure to read and understand the manual could result is personal injury, property damage or permanent damage to your boat! It is also important to run your boat responsibly. With proper care and maintenance, you will be able to proudly enjoy your Miss Budweiser for many years to come.

This boat has been designed to race in an oval path, just like its full scale counterpart. Therefore, after you have installed the turn fin to the right sponson, you will only be able to turn to the right. Do not attempt turns to the left, as you will flip the boat! If you have to turn left, do so in a large diameter turn and at slow speeds.

When operating the boat, stay clear of people, full-scale boats, stationary objects and wildlife. It is preferable to operate the Miss Budweiser in low wake, low wind conditions and in areas free of people, wild life and objects.

Before you operate your model, make sure that your frequency is clear. If someone is operating on the same frequency, both models could go out of control, possibly causing damage to the models or to others. Check all of the hardware, manifold, pipe and propeller for security before and after each run.

If at any time while operating your model you sense any abnormal function, end your operation immediately. Do not operate your boat again until you are certain the problem has been corrected. Always stay clear of the propeller!

If you have any questions regarding the Pro Boat™ Miss Budweiser, please contact:

Horizon Service Center 4105 Fieldstone Rd. Champaign, IL 61822 1-877-504-0233 www.horizonhobby.com

Suggested Field Equipment and Supplies

Although the Pro Boat™ Miss Budweiser comes almost totally assembled, you will need a few tools and some accessories to keep it running in top form. We recommend that you have the following items in your field kit:

Hex Driver: 4mm, 3mm, 2.5mm, 2.0mm Adjustable Wrench: large and small Phillips screwdriver Large pliers or channel locks Threadlock (blue) Cable Grease CA or epoxy Glass cleaner Clean rags/towels
Gasoline and oil mixture
Fuel bulb or funnel
Hangar 9® Ratio-Rite™ Cup (HAN3101)
8 "AA" alkaline batteries
Clear radio box tape
Spare cockpit securing knurled nuts

Section 1: Building the Boat Stand

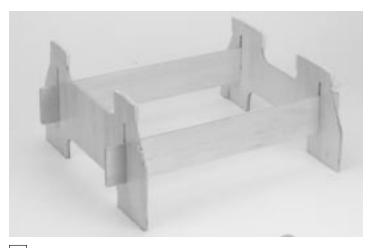
Parts Needed

Plywood boat stand pieces (4)

Tools and Adhesives Needed

CA or epoxy

Step 1. Locate the plywood boat stand pieces (4). You will see there are two identical pieces that are the sides. You will also notice two end pieces. One of the end pieces has a deep slot that has been cut out to allow room for the stuffing box to clear. This piece measures 6" in height. This will be the back end piece. The other end piece measures 7" in height. This is needed to be used for the front end piece, as it will allow clearance for the turn fin to be installed once you have the boat rest on the completed boat stand.



Step 2. Attach the side boat pieces into by interlocking them into the end pieces as shown.



Step 3. Secure the interlocking boat stand with medium thick CA or epoxy. Make certain that you allow the CA or epoxy fully cure before placing the boat on the stand.

Section 2: Attaching the Turn Fin

Parts Needed

Turn Fin 3mm hex screws (2)

Tools and Adhesives Needed

3mm hex driver Hand drill bit (if necessary) Blue Threadlock

Locate the included turn fin. This will be attached to the right sponson as it will allow only right turns to be made. Any attempt to turn the boat left will cause the boat to flip, especially if this is done in a tight diameter and at high speeds.

Step 1. Once the boat stand is complete, place the Miss Budweiser carefully on the completed boat stand.

Step 2. Locate the turn fin and the included 3mm hex screws (4) to secure the turn fin.

Step 3. Note the two holes where you will attach the turn fin have been already drilled for you at the factory. Take a small diameter hand drill bit to clean out any paint residue that may be resting inside the holes. Be careful not to enlarge the holes or the hex screws will not properly fit inside the holes, preventing you from securing the turn fin.

Step 4. Carefully place a few drops of blue Threadlock on the threads of all four hex screws. This will help to keep the screws secured to the blind nuts within the sponson.



Step 5. Carefully attach the turn fin onto the right sponson as shown and tighten the hex screws with a 3mm hex driver.

Section 3: Installing the Rudder

Parts Needed

Rudder 2.5mm hex screw

Tools and Adhesives Needed

2.5mm hex driver

Step 1. Locate the stainless steel rudder and 2.5mm hex screw.



Step 2. Carefully insert the rudder as shown.



Step 3. Find the flat spot on the rudder. Using the 2.5mm hex screw, tighten the hex screw on the flat spot as shown.

Section 4: Installing	Transmitter Batteries
Parts Needed 8 "AA" Alkaline batteries	
Step 1. Remove the JR XR3i transmitter from the foam packaging.	Step 3. Reinstall the battery holder in the transmitter and re-attach the transmitter battery access cover.
Step 2. Remove the battery access cover from the bottom of the transmitter and remove the empty battery holder. Install 8 "AA" batteries into the battery holder. Note the proper polarity.	Step 4. Turn the transmitter on to ensure that the batteries have been installed correctly. Once you have seen that the transmitter has power, turn the transmitter off again.
Section 5: Installing	g Receiver Batteries
Parts Needed 4 "AA" Alkaline Batteries Water-proof tape Balloon for receiver (optional)	
Step 1. Note the radio box below the tuned pipe. Remove the clear lid of the radio box.	
Step 2. Observe the radio location, carefully noting where the receiver and the receiver battery holder are secured.	
Step 3. Carefully pull the empty receiver battery holder from the radio box making certain that the switch harness does not become unplugged from the receiver. Install 4 "AA" batteries into the battery holder. Note the proper polarity.	
2 Harry	Step 5. Re-install the radio box cover and carefully tape
	around the edge on all four sides with waterproof tape. This is very important, as it should properly seal your valuable electronics from any water in the event that you flip the boat or take on any water.
	Step 6. Turn the transmitter back on. Then, turn the black switch for the receiver on. Next, give the transmitter rudder and throttle input to make certain that both function correctly Once you are certain that the radio is functioning correctly, turn the receiver off, and then turn off the transmitter.
Step 4. Carefully reinstall the battery holder back into the	

If you have any questions with the radio setup, refer to the radio system instructions or contact the Horizon Service

Center at 1-877-504-0233.

radio box. You may also choose to place the receiver inside a balloon to better protect it from moisture.

Section 6: Fuel/Oil Mixture

Parts Needed

Ratio Rite™ measuring cup Unleaded gasoline Zenoah® 2-stroke oil

Step 1. Mix gasoline and 2-stroke oil (ZEN20001) at a mixing ratio of 32 : 1 (gas to oil) using the Hangar 9° Ratio Rite Mixing Cup (HAN3101).

Step 2. Remove the fuel tank cap and fill the fuel tank with the gasoline and oil mixture. Use a funnel to prevent spills. If you do spill, be certain to immediately wipe it up with a clean towel or rag.

Section 7: Starting the Engine

Step 1. Read the included Zenoah® G23 marine engine manual thoroughly to become familiar with the proper care and operation. Do not attempt to operate this engine until you have read the engine manual thoroughly.

Step 2. Turn the radio system on (transmitter first, then the receiver.)

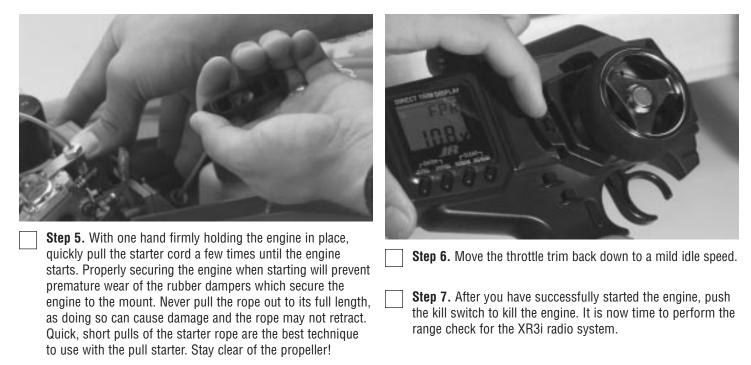


Step 3. To start the engine, push the priming bulb located on the carburetor three to four times to prime the engine. If the engine is warm, there should be no need to prime the engine.



Step 4. Open the throttle trim to an approximate position of 1/3 to 1/2 open. (See radio manual.)

Section 7: Starting the Engine (continued)



Note: First time starts may require several pulls before the engine starts.

Note: It is a good idea to perform a range check prior to operating your boat after any major repair, installation of new batteries or at the beginning of each boating season.

Section 8: Range Checking the XR3i Radio System

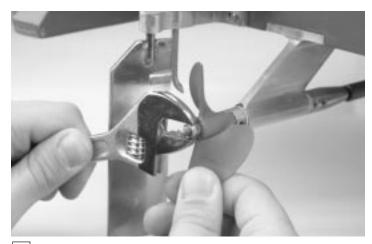
Important

Range check your radio system before the first run of the Miss Budweiser to make certain that it is functioning correctly. Make sure that the receiver antenna is erected properly

that	the receiver antenna is erected properly.		
	Step 1. With the boat in its stand, the radio system turned on and the transmitter antenna down, walk off 30 paces (90 feet) from the ProBoat™ Miss Budweiser.	Step 3. With your assistant again 90 feet away, engine. Quickly repeat the same range check as fully making sure you observe proper control me from your transmitter input. Make certain you co	above, care- ovement
	Step 2. Have an assistant remain with the boat to check for proper control movement from your transmitter input. When you are satisfied that the radio is functioning properly, you can continue.	within 60 seconds to prevent the engine from over Push the kill switch to stop the engine. Once you satisfied your radio system has passed the range you are ready to start the engine and launch your	u are e check,

Section 9: Initial Launch of Miss Budweiser With the transmitter antenna up, maneuver the Miss water coming from the water outlet, bring the boat in and Budweiser in an oval, turning only to the right at slow to make sure that the water cooling line or the brass water medium speeds. Make certain that the boat and radio system pickup located near the rudder are not clogged. are functioning correctly. If at anytime you notice that the boat and/or radio system As you are running the Miss Budweiser in an oval, watch for are not functioning correctly, end the operation of the boat water being discharged from the water outlet of the left side immediately and do not run the boat again until you are of the hull. Water flowing from the water outlet indicates the confident that the problems have been corrected. engine is being properly cooled. If you do not notice any **Section 10: Maintenance Parts Needed Tools Needed** Replacement prop (as needed) Adjustable wrench (small) Container for parts (small) Replacement shaft Teflon® sleeve (as needed) Hex driver (2.0 /2.5/3.0/4.0mm) Clean rags/towels Replacement exhaust coupler (as needed) Cable grease **Pliers** Motor spray or alcohol Tie wraps The Pro Boat™ Miss Budweiser should provide many hours of • Make sure all water-cooling lines are properly attached to the exciting high-speed racing fun with just minor maintenance. engine head and manifold. (See appendix for photo.) Preventative maintenance is very important. Taking the time to • Check propeller for any chips or cracks. If you encounter any make sure that all of the screws and bolts are properly secured damage to the propeller, replace it as a cracked or damaged before each run before and after each operation and regularly propeller will effect the performance and could cause safety lubricating the flex cable will prevent many problems. concerns. · After re-fueling, wipe away any spilled or excess fuel from Replacement parts are available from Pro Boat. See the back of inside the hull. this manual for specific descriptions and item numbers. After running the Miss Budweiser: Before operating the Miss Budweiser: Turn receiver (on/off switch on radio box) off. · Turn radio transmitter on. • Turn transmitter off. • Turn receiver switch on. · Wipe off any exhaust residue from the boat. Perform radio range check to make certain radio system is • If you have operated the Miss Budweiser in salt water, thoroughly performing appropriately. rinse the hull, deck, and hardware with fresh water, then dry · Make sure receiver and transmitter batteries are charged and with a clean rag or towel. • Make certain that all screws/nuts/bolts are secure. replace as needed. • Make sure that all screws/nuts/bolts are properly secured. Check · Check condition of exhaust coupler. the manifold screws and the screw and nut that secure the back of the tuned pipe to make sure they are properly tightened. Lubrication It is vitally important to properly lubricate the flex drive shaft and the propeller shaft with heavy cable grease every 5-10 hours of operation. You will also find that it will eventually become necessary to replace the Teflon liner sleeve of the drive shaft. At some point, it may also become necessary to replace the drive shaft (flex cable) as well. Simply follow the instructions below to properly lubricate your drive shaft. **Step 2.** Find a container to place the parts that you will **Step 1.** Carefully note how the entire drive shaft is installed. remove so that you do not lose them. This is pivotal in order to properly re-assemble the drive shaft after you have finished lubricating it.

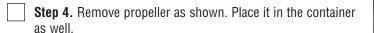
Lubrication (continued)



Step 3. Loosen and remove prop nut as shown. Place in a small container.



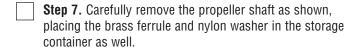
Step 8. Remove the drive shaft flex cable. Replace the Teflon® liner as needed.

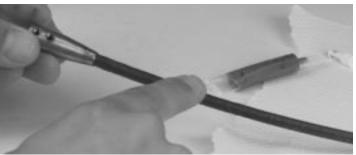






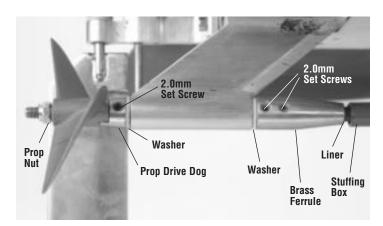
Step 6. Loosen and remove the two 2.0mm set screws in of the brass ferrule.





Step 9. Lubricate the entire flex cable with heavy cable grease as shown and then re-install the flex cable back through the liner and stuffing box and into the collet.

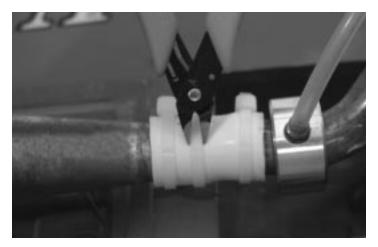
When re-installing the flex cable back into the collet, it may be necessary to loosen the four engine mount support screws and change the angle of the motor to allow proper adjustment. Simply push and twist the flex cable and guide the engine up or down as needed. (See appendix, photo A for completed step.) Next, lubricate the prop shaft.



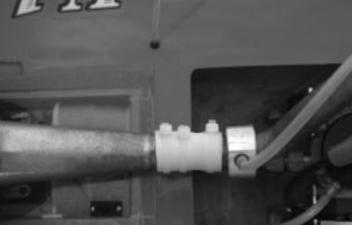
Step 10. Carefully re-install the remainder of the drive shaft assembly and propeller. Make sure that the set screws are tightened down on the flat spots of the shafts. Also be certain to place a drop of Threadlock on each set screw before re-tightening them.

Replacing the Exhaust Coupler

After a period of time, it may become necessary to replace the exhaust coupler that joins the tuned pipe to the exhaust header (see replacement parts, Section 10). To replace the coupler, follow these simple instructions:



Step 1. Cut tie wraps that secure worn coupler to the manifold and pipe.



Step 4. Replace the exhaust coupler and secure it with tie wraps. Make certain that there is an approximate space of 1/8" to 1/4" of space remains between the manifold and the tuned pipe.



Step 2. Use a 3mm hex driver to loosen the two tuned pipe mount screws. Now, pull the tuned pipe out as shown.

Step 3. Remove the remainder of the worn coupler (from manifold and/or pipe) and thoroughly wipe away any oily residue from both the manifold and pipe. It will be helpful to use motor spray (DYN5500) or alcohol to fully remove the residue.

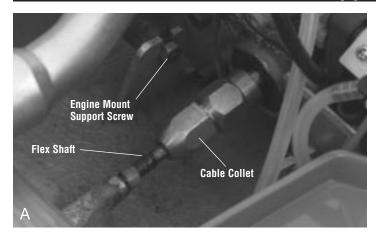
Step 5. Place a drop of threadlock on the two 3mm screws that you removed. Carefully place the screws back through the tuned pipe mount bracket. Make certain the screws are tight.

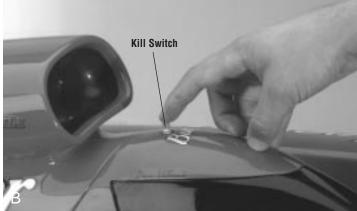
Section 11: Replacement Parts

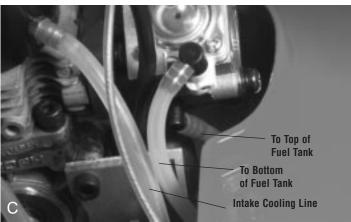
Your local hobby store should carry a good supply of Miss Budweiser replacement parts. You can also purchase these parts from Horizon Hobby at **www.horizonhobby.com** or call toll-free 1-800-338-4639.

Stock #	Description	Stock #	Description
PRB2251	Rudder Bracket and Arm	PRB2273	Kill Switch
PRB2252	Rudder	PRB2274	Fuel Tubing
PRB2253	Rudder push rods with clevis	PRB2275	Water Cooling Tubing
PRB2254	Turn fin and mounting hardware	PRB2276	Blind Nut and Hex Screw Set
PRB2255	Wing Struts	PRB2277	Cockpit
PRB2256	Horizontal Wing	PRB2278	Knurled Cockpit Nuts (2)
PRB2257	Antenna Tube	PRB2279	Boat Stand
PRB2258	Tuned pipe with mounting hardware	PRB2280	Propeller
PRB2259	Pipe Mount	PRB2281	Drive Dog with Set Screw
PRB2260	Manifold with mounting screws	PRB2282	Propeller Shaft
PRB2261	Scale Exhaust Cover	PRB2283	Propeller Shaft Holding Strut
PRB2262	Brass Water Pick-up	PRB2284	Brass Ferrule with 2 Set Screws
PRB2263	Cable Collet	PRB2285	Water Outlet Nut
PRB2264	Fuel Tank	PRB2286	Y-Harness for Rudder Servos
PRB2265	Flex Cable	PRB2287	Receiver Battery Box
PRB2266	Teflon Liner	PRB2288	Nylon Washers (Rudder Shaft [2], Propeller Shaft [2])
PRB2267	Radio Box Lid	PRB2289	2 mm Set Screw (4)
PRB2268	Throttle Cable with EZ connector	PRB2290	Exhaust Coupler
PRB2269	Motor Mount (4)	PRB2291	Prop Nut
PRB2270	Vibration Dampers with hardware (4)	PRB2292	Water jacket for manifold
PRB2271	Hull with engine rails and stuffing box	PRB2293	Linkage and clevis for rudder servos
PRB2272	Decal Sheet		

Appendix











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